

Interactive Systems

Thesis proposals in: Human-Computer Interaction,
Interaction Techniques

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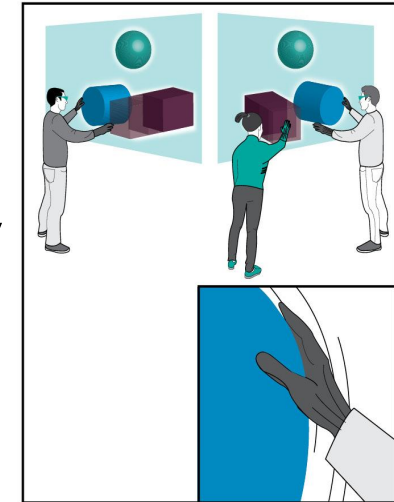
Navigation and Augmented Reality

- *Augmenting physical landscape, environment and artifacts with digital information*
- Using a smartphone as a magic lens to overlay dynamic information on a physical map. (Morrison et al CHI2009 best paper nominee)



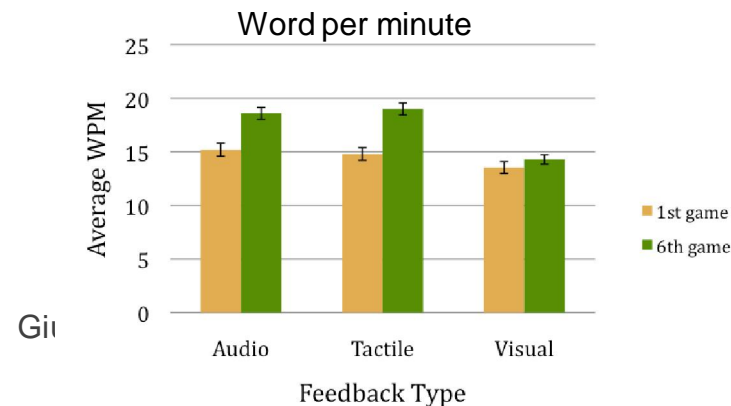
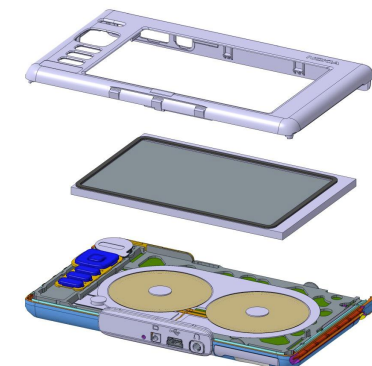
Multimodality: Best Feedback Across Modalities

- *What is the best modality for feedback across visual, audio tactile ? How can vibrotactile be used for enhancing interaction?*
- Mapping Information to Audio and Tactile Icons , Hoggan, Raisamo, Brewster ICMI 2010



a 3D VIBRO-ASSISTED MULTI TOUCH

Vibro-actuator on mobile



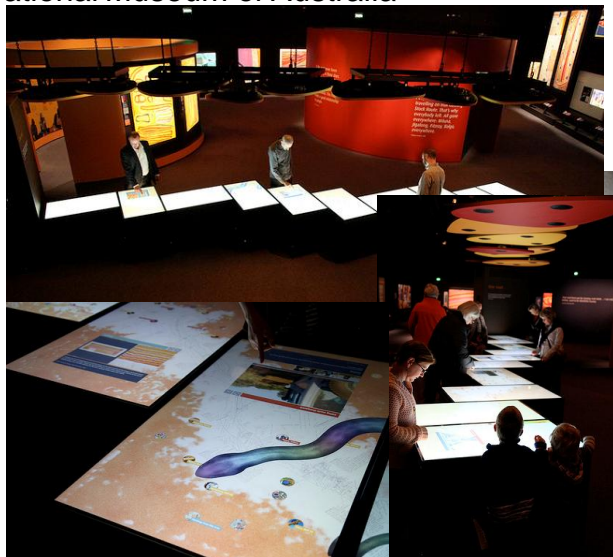
Multitouch and next generation infotainment

- *Developing multitouch surfaces to engage people in manipulating media and playing games*
- Designing for multitouch screens engagement CHI2008, CHI2010, DPPI 2011

Jazz festival playful multitouch



National Museum of Australia



See our spin-off
multitouch.fi Opel Ampera

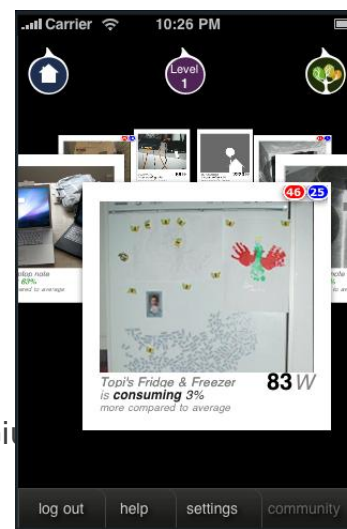
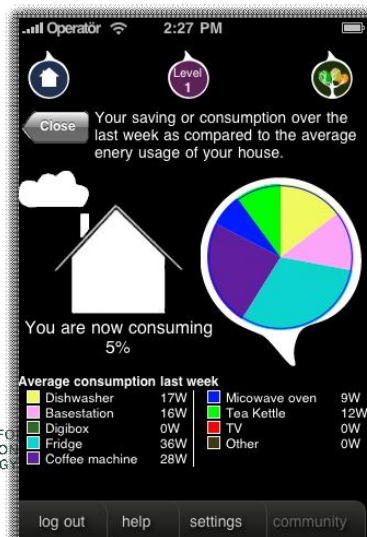
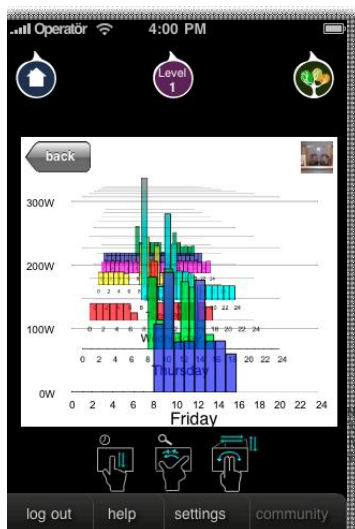


Lincoln luxury vehicles

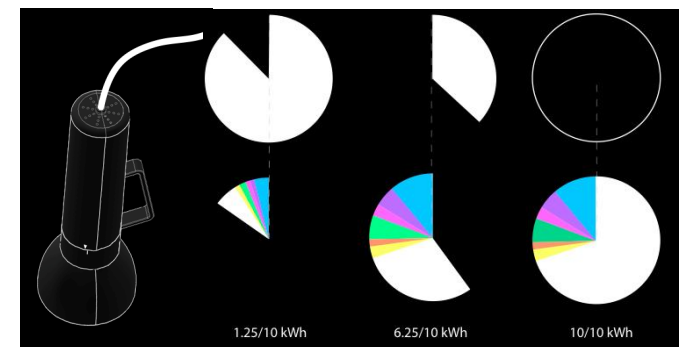


Ubiquitous Sensing and Pervasive Games

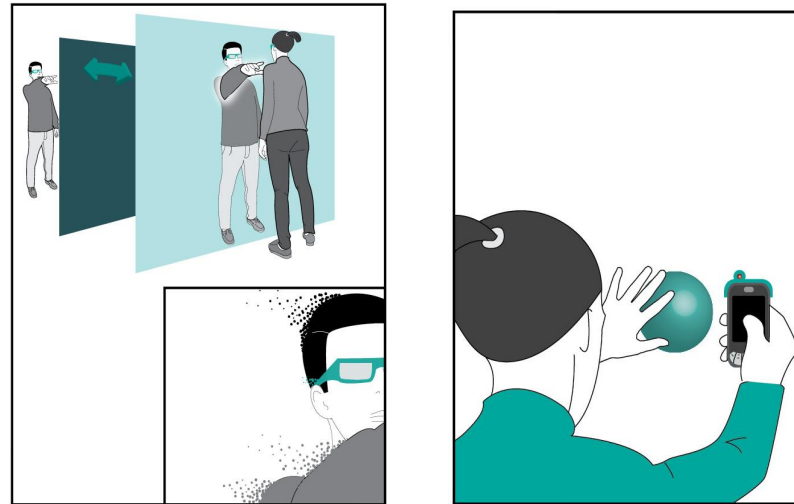
- *Developing mobile and ambient interfaces based on pervasive sensors. Applications in mobility and Energy conservation using game oriented apps.*
- Eco-Feedback on the Go: Motivating Energy Awareness, Spagnolli et al IEEE Computer, 2011



<http://www.energyawareness.eu>



Kinect and 3D depth Sensors



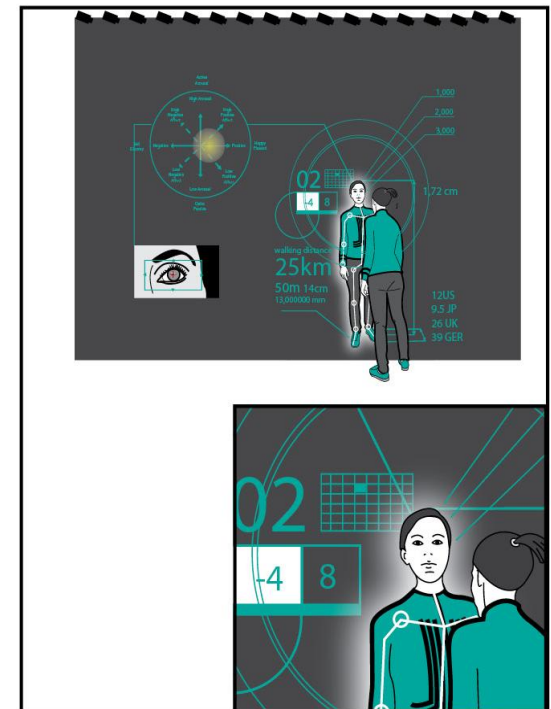
b 3D BODY RECONSTRUCTION
& VISUALIZATION

Exploring the capabilities of 3D depth cameras (like Microsoft Kinect) for interaction in games and other information navigation

Kuikkaniemi, Jacucci et al. From Space to Stage: How Interactive Display will change public space, IEEE Computer , Forthcoming.

Domesticating Search

- Using heart rate, respiration and other physiological signals to augment interaction with media: adaptive media browsing, annotating media, etc.



c BIOFEEDBACK-ENHANCED COMMUNICATION